



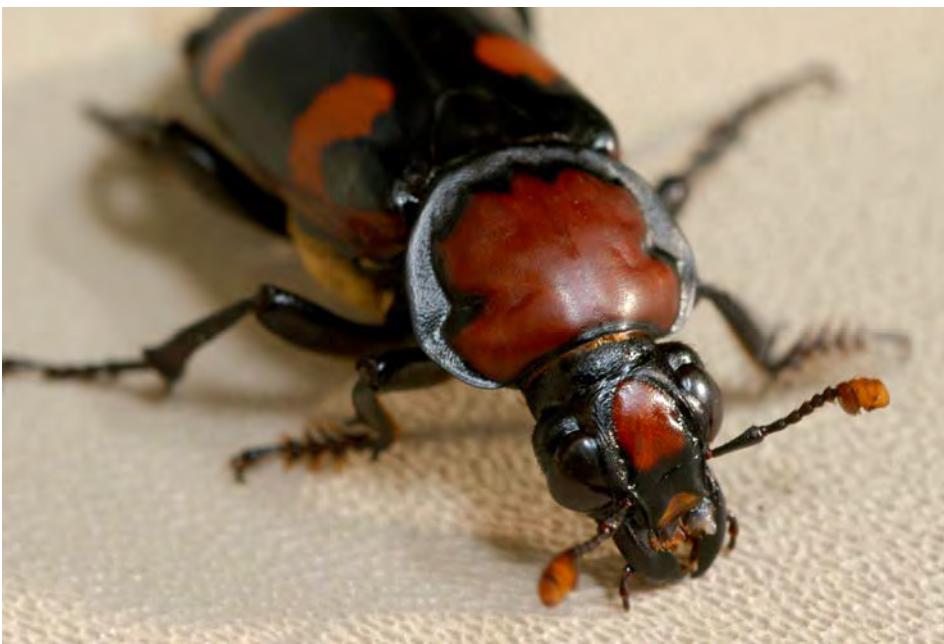
A Partnership to Bring Back the American Burying Beetle

This summer will mark five consecutive years that the St. Louis Zoo, the Missouri Department of Conservation, the U.S. Fish and Wildlife Service, and the Nature Conservancy have worked to bring back the federally endangered American burying beetle (*Nicrophorus americanus*) by releasing captive-bred beetles onto Wah'Kon-Tah Prairie in southwest Missouri. This large, brilliantly colored beetle (about 1 ¼" in length) was previously found in 35 states and several provinces encompassing the eastern half of the U.S. and southern Canada. Starting around the mid-1950s, the beetles were extirpated from the core of their range likely due to habitat loss / fragmentation and declines in bird and mammal populations that they rely on for carrion resources (e.g., bobwhite quail, wild turkey, greater prairie chicken, passenger pigeon – extinct, etc.). Today, only one remnant population remains in the east with scattered populations found in the six states on its western front.

These charismatic beetles perform an important ecological service. They serve as nature's undertakers, utilizing animal carrion to feed and raise their young. The strong flying American burying beetles use their highly sensitive antennae to locate vertebrate carrion, sometimes at great distances. The adults will feed on carrion of any size, but if they find a carcass that is in the range of 150-200g, a mated male-female pair will roll the carcass into a ball, coat it with their specialized saliva that slows the microbial decomposition process, bury it in an underground nest chamber, and deposit their eggs nearby. From there, the adult beetles perform a truly unusual activity. They practice biparental care – both parents feed and protect the developing larvae for the first several days after hatching – a behavior unique for beetles in particular and insects in general.



Captive-bred American burying beetle
(Photo courtesy of Bill Graham)



Female American burying beetle (Photo courtesy of St. Louis Zoo)

Since 2005, the St. Louis Zoo has been breeding American burying beetles so that they can be reintroduced into Missouri and other states as part of the national recovery effort. After five years of releases, it appears that the American burying beetle population on Wah'Kon-Tah Prairie is growing. Over the coming years, MDC, the St. Louis Zoo, and partner organizations will be using mark-recapture efforts to assess the size and health of the beetle population in addition to small mammal and breeding bird surveys to develop a better understanding of carrion resources available for the beetles. Hopefully, our efforts will show that a viable and self-sustaining population of these endangered beetles can be established on highly diverse and productive sites, like Wah'Kon-Tah Prairie, placing the beetles one step closer to recovery.

By ANDREA SCHUHMANN, natural history biologist

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Jay Henges Shooting Range and Outdoor Education Center

1100 Antire Road, High Ridge, MO 63049 • mdc.mo.gov/node/299



From the east/St. Louis

I-44 west to Beaumont Antire Road, exit 269. Left over I-44 to Antire Road. Right on Antire. One hundred feet to entrance.

From the west/Eureka

I-44 east to Beaumont Antire Road, exit 269. Follow exit lane around to top.

HOURS:

April 1 – November 30

Wednesday: 11 a.m. – 7:30 p.m.

Thursday and Saturday: 10 a.m. – 5:30 p.m.

Friday and Sunday: 10 a.m. – 4:30 p.m.

December 1 – March 31

Wednesday – Sunday: 10 a.m. – 4:30 p.m.

Programs are free. Call **636-938-9548** or email henges.range@mdc.mo.gov with your name and phone number to sign up for a program requiring registration. Up to two reservations are allowed per registration; groups should contact the range for more information. If you are unable to attend, please call and cancel as a courtesy to those on the waiting list. Interpretive services are available for those with hearing loss with 5 days notice.

Beginning Handgun

July 7 • Thursday • 6 – 9 p.m.

(Ages 16 and up)

This program will include: safety, basic operation, shooting fundamentals, maintenance, ammunition for hunting or target shooting, safe firearm storage and regulations for hunting with a handgun. We will start with a classroom session then advance to a live-fire session. All

firearms and safety equipment will be provided. If you wish to bring your own firearm, you must bring your own factory ammunition. Anyone under the age of 18 must be accompanied by an adult. (Reservations begin June 23.)

Learn to Deer Hunt Open House

July 12 • Tuesday • 6 – 8 p.m.

(Ages 6 and up)

Drop by the Jay Henges Shooting Range Outdoor Education Center anytime between 6 and 8 p.m. and visit with staff excited to help you learn more about deer hunting. Learn at your pace with multiple booths including regulations, gear, cleaning, and cooking along with experts on hand to answer your questions. In addition, gain information and consider applying for a managed hunt for first-time deer hunters, a hassle-free mentored deer hunting experience with MDC staff this fall. (Reservations begin June 15.)

Women's Shooting Sports Sampler

July 14 • Thursday • 6 – 9 p.m.

(Ages 10 and up)

Are you interested in the shooting sports, but have no experience with firearms or bows? Here's your opportunity! Join us for a "try-it-out" evening at the range. Try different types of firearms as well as archery equipment. All necessary equipment will be provided. (Reservations begin June 30.)

Youth Shooting Camp

July 18 - 20 • Monday - Wednesday • 9 a.m. – noon each day

(Ages 10 – 15)

This program provides students with an opportunity to acquire the knowledge, skills and attitude necessary to safely participate in shooting sports. Our

instructors will help all participants develop their skills with .22 rifle, shotgun, and archery. All equipment will be provided. (Reservations begin July 4.)

Beginning Archery

July 21 • Thursday • 6 – 9 p.m.

(Ages 10 and up)

This program provides students with an opportunity to acquire the knowledge to safely participate in this fun activity. Our instructors will help all participants develop their archery skills as we cover bow types, parts of the bow, arrows, proper stance, grip, form, release, and other important tips and techniques. All bows and safety equipment will be provided. (Reservations begin July 7.)

Beginning Trapshooting

July 28 • Thursday • 6 – 9 p.m.

(Ages 10 and up)

If you enjoy shooting a shotgun, but do not know the specifics of the game of trapshooting, then join us for this program. We'll learn the basics of trapshooting. All firearms and safety equipment will be provided. If you wish to bring your own firearm, you must bring your own factory ammunition. (Reservations begin July 14.)

Youth .22 Handgun

July 30 • Saturday • 8 – 9:30 a.m.

(Ages 9 – 15)

This program provides youth with an opportunity to acquire the knowledge, skills, and attitude necessary to safely shoot a .22 Handgun. The instructors will cover safety, parts of the handgun, and shooting fundamentals. All firearms and safety equipment will be provided. (Reservations begin July 16.)

Unless otherwise indicated, youth under the age of 16 must be accompanied by an adult.

Busch Shooting Range and Outdoor Education Center

2360 Hwy D, St. Charles, MO 63304 • mdc.mo.gov/node/270

Basic Archery

July 12 • Tuesday • 6 – 9 p.m.

(Ages 9 and up)

This program provides students with an opportunity to acquire the knowledge and skills needed to safely participate in this fun and rewarding outdoor activity. All equipment and materials will be provided for this class. Our instructors will help all participants develop their archery skills as we cover types of bows, parts of the bow and arrow, proper stance, grip, form, release, and other important tips and techniques. Children ages 9 – 16 must be accompanied by an adult. Class will meet in the August A. Busch Conservation Area Regional Office classrooms. (Reservations begin June 13.)

Youth Shotgun Camp

July 13 • Wednesday • 9 a.m. – noon

July 14 • Thursday • 9 a.m. – noon

(Ages 11 – 15)

This camp will introduce students to the basics of shooting a shotgun. The classroom portion will cover safety, shotgun fit, stance, and more. Then we will head outside to pattern and shoot claybirds. Dress for the weather, water will be provided. Not recommended for anyone weighing under 90 lbs. Class will meet in the August A. Busch Conservation Area Regional Office classrooms. Must attend Wednesday in order to attend Thursday. (Reservations begin June 13.)

Basic Shotgun

July 16 • Saturday • 9 a.m. – noon

(Ages 12 and up)

This program will teach the basics of shotgun shooting. We will meet in the Busch Conservation Area Regional Office classroom where we will go over safety, actions, choosing a shotgun, chokes, stance, and much more. Then we will head out for some live fire practice. Must attend clinic to participate in live fire. Ages 12 - 15 must be accompanied by an adult. Not recommended for anyone weighing less than 90 lbs. (Reservations begin June 16.)

Beginning Atlatl

July 23 • Saturday • 9 a.m. – noon

(Ages 11 and up)

Come join our experts and learn the art of atlatl. The atlatl predates the bow and arrow. In 2010 the atlatl became a legal method of harvesting deer in Missouri. It is used to throw a 4 to 6 foot long, spear-like projectile known as a dart. The atlatl is a wooden shaft approximately a foot-and-a-half long with a socket or knock at the rear to engage the dart. The dart is placed along the shaft with its back end resting in the socket or knock. The hunter grips the atlatl near its front end and performs a forward throw using the upper arm and wrist. The flipping motion of the atlatl creates angular momentum that propels the dart with greater speed and power than can be achieved with the arm alone. This program will meet in the August A. Busch Conservation Area Regional Office classrooms. (Reservations begin June 23.)



Due to the range closure, all Busch Range programs will be held at the Busch Conservation Area classrooms in the St. Louis Regional Office unless otherwise noted.

Programs are free. Call **636- 441-4554** to register Monday through Friday 8 a.m. – 5 p.m. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list. Interpretive services are available for those with hearing loss with 5 days notice.

Basic Handgun

July 25 • Monday • 6 – 9 p.m.

(Ages 16 and up)

This two-part program will include handgun operation, shooting fundamentals, safety, maintenance, and safe storage. We start with a classroom session, followed by a live-fire session. Although equipment and ammunition will be provided, you may bring your own. Due to the Busch Range renovation, this program will be held at the Jay Henges Shooting Range and Outdoor Education Center. (Ages 16-18 must be accompanied by an adult.) (Reservations begin June 24.)

Unless otherwise indicated, youth under the age of 16 must be accompanied by an adult.

Powder Valley Conservation Nature Center

11715 Cragwold Road, Kirkwood, MO 63122 • mdc.mo.gov/node/271



From I-44 east take the Watson Road exit and turn left on Geyer. Cross over the bridge and turn left on Cragwold Road. Follow one mile to the entrance. Enjoy nature exhibits, attend programs, purchase hunting and fishing permits, browse through a nature-related gift shop, and pick up free conservation brochures. Outdoors, enjoy three miles of hiking trails through oak-hickory forest.

HOURS:

Building: Tuesday – Saturday: 8 a.m. – 5 p.m.
Area: Daily: 8 a.m. – 8 p.m. DST
8 a.m. – 6 p.m. CST

Programs are free. Call **314-301-1500** to register. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list. Interpretive services are available for those with hearing loss with 5 days notice.



Early Morning Hike

July 6 • Wednesday • 7 – 9:30 a.m.

(All ages)

Who's down for getting up early? That doesn't sound so good? If you are willing to be an early riser for one day, you might increase your chances of seeing wildlife at Powder Valley. Join us for a hike of all the trails. Binoculars will be provided. Meet at the arbor at the front entrance to the nature center. (Reservations begin June 22.)

A Naturalist State of Mind

July 9 • Saturday • 10 a.m. – 2 p.m.

(Families)

What is a naturalist? Test your knowledge of some things found in nature. After completing the fun quiz, explore Powder Valley with a photo scavenger hunt to discover more. (Reservations not required; participants are free to come and go.)

Nature's Nook Book Club for Adults

July 15 • Friday • 10 – 11:30 a.m.

(Adults)

Our book club meets every other month to discuss an important work of fiction or non-fiction related to the natural world. Messages from an Owl, by Max R. Terman is a delightful story of a rescued owl. Start reading, and we will see you soon! (Reservations begin July 1.)

MoNEP - Missouri Nature & Environmental Photographers Nature Photography Program

July 16 • Saturday • 10:30 a.m. – noon

(Ages 12 and up)

MoNEP (Missouri Nature and Environmental Photographers) invites you to join us for a thirty minute show of members' photographic images of the natural world. After a short break members will share some simple tips on how to improve your nature photography, no matter what camera you use. We will venture outside (weather permitting) to implement some of the tips we discussed. Take advantage of spending time with and sharing the expertise of these amazing photographers. (Reservations begin June 28.)

Hallway Exhibit: Ebb and Flow

by MoNEP (Missouri Nature & Environmental Photographers)

This exhibit reflects the artistic point of view of more than two dozen members of the Missouri Nature and Environmental Photographers. The works selected are from

a cross section of our membership and all of the images feature water in some form as the main subject. We hope you will enjoy these selected works as much as the photographers have enjoyed capturing the beauty, colors, lines, and patterns that have caught our collective eye.

MoNEP members come from all walks of life, but all enjoy a common passion for photography, nature, and the environment. Our meetings are held at the Ethical Society in Clayton on the third Tuesday of the month at 7 p.m. and feature speakers who are experts in photography, conservation and/or the environment. We hope you will have the opportunity to be a guest at one of our meetings or to attend our next bi-annual nature photography seminar which will be held on Saturday, September 17, 2016. Please visit www.monep.org for more information.

Powder Valley Conservation Nature Center

11715 Cragwold Road, Kirkwood, MO 63122 • mdc.mo.gov/node/271

You and Me under the Canopy

July 20 • Wednesday • 10 – 11 a.m.

(Ages 2 – 6)

Come see the topic we are exploring this month. Families, meet in the nature center lobby for a “nature” adventure. Make sure to dress for the weather because we won’t be in the building long. Everyone will hike with the naturalist to a special place in the forest and enjoy a nature story under the tree canopy. Siblings are welcome. (In case of inclement weather the program will be indoors and may be shortened.) (Reservations begin July 6).

Amazing Armadillos

July 26 • Tuesday • 9:30 – 11 a.m.

(Ages 6 and up)

Armadillos are mammals. Strange mammals! Our nine-banded armadillos have armored bodies but can roll up nearly into a ball. When startled, they can jump 4 feet straight up in the air. They have exactly four identical babies at a time. In many ways they are very different from most other mammals. Come prepared to be amazed by armadillos! (Reservations begin July 12.)

Orienteering

July 28 • Thursday • 9:30 – 11:30 a.m.

(Families, ages 9 and up)

Have you ever wanted to learn how to navigate using a map and compass? Discover how to use these tools, and put your new skills to practice as you navigate through an orienteering course. (Reservations begin July 14.)

Discover Nature Summer Programs

Fridays in July

9:30 – 11:30 a.m. and 1 – 3 p.m.

All ages (groups and camps welcome)

Participants will visit the different stations at their own pace. • Indoor and outdoor activities available (weather permitting). Reservations required for groups of 10 or more and begin immediately. Call 314-301-1500 to make a reservation.

July 1 – Winged Wonders

Bird watching

Feather and wing touch table

Migration game

July 15 – Amphibians and Reptiles

Live amphibians and reptiles

Touch table

July 29 – Camping and Survivor Skills

Compass

Fire, water and shelter

Camping

Bear Aware

July 8 – Flowers and Trees

Tree ID

Native plant ID

Pollination game

Seed balls

July 22 – Wildlife Signs

Animal architects (homes)

Tracks

Scat

Touch table

In Memory of Jack McGinnis

Jack McGinnis, a volunteer at Powder Valley Conservation Nature Center, passed away Sunday, April 3, 2016. Jack was the beloved husband of Marilyn McGinnis and father of Patricia, Robyn, Michael, and Timothy. Jack was a devoted husband, father, grandpa, and dear friend to many, including the staff and volunteers at Powder Valley Conservation Nature Center. He received two Battle Stars, a unit citation, and Korean Presidential Citation for serving in the Korean War. Jack began volunteering in 1993. He always greeted visitors with a gentle smile and warm hello. He devoted more than 5700 hours to conservation through his volunteer work. Jack made us laugh and appreciate the beauty of the natural world around us. Thank you Jack for sharing your time with us. We will miss you.



Columbia Bottom Conservation Area

801 Strodtman Road, St. Louis, MO 63138 • mdc.mo.gov/node/298



From I-270 north, take the Riverview Drive exit (last Missouri exit); go north 2.8 miles. Riverview Drive becomes Columbia Bottom Road at its intersection with Larimore Road. The entrance is on the right-hand side.

HOURS:

Building: Wednesday – Friday: 8 a.m. – 5 p.m.

Saturday – Sunday: 8 a.m. – 4 p.m.

Area: One-half hour before sunrise to one-half hour after sunset except authorized activities.

Programs are free. Call **314-877-6014** to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list. Interpretive services are available for those with hearing loss with 5 days notice.

Sights and Sounds of Summer

July 9 • Saturday • 9:30 – 11:30 a.m.

(All Ages)

Join us for an exploration of Columbia Bottom. A quiet landscape hides a rich natural life created by the meeting of two great rivers. We will listen for sounds of life and look for prairie, woodland, and bottomland treasures. There will be easy walking, suitable for the oldest adults to the smallest walking children (some parts are not stroller friendly). You may want to bring binoculars or a magnifying glass to enhance your exploration. Bring a sack lunch, if you like, we will end up at a picnic area where we can enjoy our meals and chat about our experiences. Meet at the Visitor Center. (Registration begins on June 23.)

Summer Fun: Spend some of your summer discovering Columbia Bottom's diverse ecosystems. The bottomland prairies, wetlands, and forests are waking up and are primed for discovering. Wednesday through Sunday come into the visitor center and check out a discovery backpack for a few hours to aid in your efforts. We offer forest, birding, prairie, and wetland/slough backpacks. You will need some form of identification to check out a backpack. Visitor center hours are Wednesday – Friday 8 a.m. – 5 p.m. and Saturday and Sunday 8 a.m. – 4 p.m.

Hopping Homes

July 20 • Wednesday • 12:30 – 2 p.m.

(All ages)

The sounds of summer often feature the choruses of the frogs and toads of Missouri. Let's decorate an abode for these vocal amphibians that you can place in your yard or garden for your own private concert. If time allows we will venture out on the area to find some of our jumping residents. (Reservations begin July 6.)

Save the Dates! Managed Youth Dove Clinic & Hunt

Aug 27 • Saturday • 4 p.m. – 7 p.m. (Clinic)

Sept 1 • Thursday • 1 p.m. – sunset (Hunt)

(Ages 11 – 15)

We know Missouri is a great place to hunt and fish. So join us for our managed youth dove clinic and hunt. To be considered, fill out the application below and send to the address provided. Bring your sponsor, shotgun, safety glasses, and hearing protection both days. Don't have a firearm? Some are available for loan. The clinic will be on August 27 at Jay Henges Shooting Range. You will learn about dove biology, hunter safety, and hunting regulations before practicing effective wing shooting with clay birds. Once you've attended this mandatory clinic, become Hunter Education certified by September 1st and you can join our youth dove hunt at Columbia Bottom. Up to forty youth will be selected depending on field conditions. Preference is given to first time applicants. (Applications accepted July 1 to 31.)

Columbia Bottom Youth Dove Hunt Application

801 Strodtman Rd., St. Louis, MO 63138

Name: _____

DOB: _____

Address: _____

Phone: _____

Do you have access to a shotgun? Yes / No First time applicant? Yes / No

August A. Busch Memorial Conservation Area

2360 Hwy D, St. Charles, MO 63304 • mdc.mo.gov/node/300

Aquatic Adventure

July 7 • Thursday • 9 – 11 a.m.

(Ages 6 – 12)

What could be more fun in early July than to see what cool things live in an aquatic habitat? Learn about an aquatic food chain and how we can affect it. There will be plenty of time to actually interact with a real aquatic environment. (Reservations begin June 27.)

Let's go Bowfroggin'!

July 8 • Friday • 7:30 – 9:30 p.m.

(Ages 12 and up)

Whether you are a master of archery or have never even held a bow, join us for a fun frog pursuit! Learn how to ID bullfrogs and green frogs, get out to the ponds to hunt, and then we'll teach you how to prep and cook up delicious frog legs! You can't knock it until you try it! (Reservations begin June 27.)

MTC Hike – Herons and Egrets

July 16 • Saturday • 7:30 – 10:30 a.m.

(Ages 12 and up)

Join us for a 2 and ½ mile hike to view the herons and egrets feeding in the MTC marsh. The young have just left the nests so we may see both young and adults feeding together. See some of the showiest members of all wading birds. Learn to identify these birds from a distance through spotting scopes provided by MDC. (Reservations begin July 1.)



From I-64/40 take Hwy 94 south to Hwy D; turn west on D for approximately two miles. The area entrance is on the north side of Hwy D.

HOURS:

Building: Monday – Friday: 8 a.m. – 5 p.m.

Area: Daily: 4 a.m. – 10 p.m.

Programs are free. Call **636-441-4554** to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list. Interpretive services are available for those with hearing loss with 5 days notice.

Discover Nature - Fishing for Kids

Throughout July • Tuesdays 6 – 8 p.m. and Saturdays • 10 a.m. – noon

(Ages 7 – 15)

The Discover Nature – Fishing program helps young Missourians gain the skills needed to become life-long anglers. Participants may complete four free lessons, each focusing on different aspects of fishing. Lessons are taught at Busch and several other area lakes throughout the summer including Forest Park, Suson Park and Bellefontaine CA. Children must be 7 – 15 years of age and accompanied by a parent or guardian. Parents and guardians are welcome to fish alongside their children. For complete details and online registration visit, discoverfishingstl.com. (Registration open now)

Rockwoods Reservation

2751 Glencoe Road, Wildwood, MO 63038 • mdc.mo.gov/node/272



From I-44 take Hwy 109 north 4 miles to Woods Avenue; left on Woods Avenue, then immediately right on Glencoe Road. From Manchester Road take Hwy 109 south 2 miles to Woods Avenue; right on Woods Avenue, then immediately right on Glencoe Road.

HOURS:

Building: Monday–Friday: 8 a.m. – 5 p.m.
Area: Sunrise to one-half hour after sunset except authorized activities.

Programs are free. Call **636-458-2236** to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list. Interpretive services are available for those with hearing loss with 5 days notice.

Aquatic Adventure

July 11 • Monday • 9 – 11 a.m.

(Ages 6 – 12)

What could be more fun in early July than to see what cool things live in an aquatic habitat? Come and learn about an aquatic food chain and how we can affect it. There will be plenty of time to actually interact with a real aquatic environment. Dress appropriately for the weather and netting aquatic critters along the shore of the Rockwoods woodland pond. All necessary equipment will be provided. (Reservations begin June 27.)

The Dance of the Honeybee

July 14 • Thursday • 10 – 11:30 a.m.

(Ages 6 – 9)

Did you know that honeybees and other pollinators have special dances? Do you know why these pollinators dance? Learn about honeybees, their special dance, and why they, along with other pollinators, are so important. Discover why honeybees, flowers, and the food we eat are all connected. (Reservations begin June 30.)

Firefly Night

July 26 • Tuesday • 7:30 – 9 p.m.

(Families with children ages 4 and up)

Come hang out with the fireflies and experience a natural light show! We'll learn about these fascinating creatures and play a fun game or two. Please bring a flashlight and water bottle, and wear closed-toe shoes. The entire program will take place outside. (Reservations begin July 12.)

Discover Nature - Fishing for Kids ages 7 – 15

See page 7 for details.

Forest Park Office

5595 Grand Drive, St. Louis, MO 63112 • mdc.mo.gov/node/10254



From I-44 take Kingshighway north to West Pine Blvd, turn left. Follow West Pine to Lindell, turn left. Continue on Lindell past Union Drive to Cricket, turn left. Take first right onto Grand Ave. The visitor's center is on the right.

HOURS:

Monday – Friday: 8 a.m. – 5 p.m.

Programs are free. Call **314-877-1309** to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list. Interpretive services are available for those with hearing loss with 5 days notice.

Open-ended Nature Play

July 12 • Tuesday • 10 – 11:30 a.m.

(Ages 0 – 6)

Bordered by shallow, cascading waterways, a suspension bridge, shade trees, and a rock garden, we will begin with an introduction to the place. The children will create their own story taking us to places we could only imagine. Bring a hat, water bottle, and shoes that can get wet. This program meets at Picnic Island off of Lagoon Drive. (Reservations begin June 28.)

PLEASE NOTE: The Forest Park Office is relocating to South St. Louis. While the move is underway, reservations will be handled through the Columbia Bottom Conservation Area office at **314-877-6014** Wednesday – Sunday.